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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/746,523	12/21/2000	Donald F. Hooper	10559-269001 / P9028	1036
20985	7590	01/26/2005	EXAMINER	
FISH & RICHARDSON, PC 12390 EL CAMINO REAL SAN DIEGO, CA 92130-2081			VO, TED T	
			ART UNIT	PAPER NUMBER
			2122	

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/746,523

Applicant(s)

HOOPER ET AL.

Examiner

Ted T. Vo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 23-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

1. This action is in response to the amendment filed under Request for Continued Examination on 10/15/2004. The claimed amendment is entered.

Claims 1-22 are canceled.

Claims 23-36 are newly added.

Claims 23-36 are pending in the application.

***Response to Arguments***

2. With regards to the newly added Claims 23-36, new ground(s) of rejection is set forth herein. All Applicants' statements/arguments with respect to newly added Claims have been fully considered but are moot in view of the new ground(s) of rejection.

***Claim Objections***

3. Claim 23 is objected to. The word "treads" in the recitation "determining if one of the plurality of treads" is misspelled. The interpretation of this word is "threads". Correction is required.

Claim 27 is objected to. Claim 27 is duplicated in the claims. Correction is required.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. Claims 23-36 are rejected under 35 U.S.C. 102(a) as being anticipated by Hardware Reference Manual, "Intel™ IXP1200 Network Processor Hardware Reference Manual", appeared in <http://www.hcs.ufl.edu/>, version 1.0, June 2000 (hereinafter: The manual).

Given the broadest reasonable interpretation of followed claims in light of the specification.

As per claim 23: The manual discloses,

*A method comprising:*

*in a parallel processor comprising a controlling processor linked to a remote console system and a plurality of micro engines, each of the micro engines comprising a plurality of executable threads (Page 4-2, Figure 4-1), determining if one of the plurality of threads is executing in a target micro engine; in response to determining, pausing execution of the threads (See page 4-47: Section 4.17, all five bullets);*

*loading hop instructions ('C language') from a debug library (See page 4-47, section 4.17, "debug libraries that execute on the StrongARM core");*

*storing program counters for the threads (See pages 4-48, steps 1, "saves the address", and associating with the program counters in Figure 4-1);*

*modifying the program counters of the target micro engine to jump to a start of the hop instructions (See pages 4-48, steps 2, "The StrongARM Core replaces the instruction...with a branch instruction", and associating with the program counters in Figure 4-1);*

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*modifying the hop instructions to return to the stored program counters (See pages 4-48, step 1, "saves the address", step 8, "branch back", means the execution routine such as breakpoint routine has a return address, and associating with the program counters in Figure 4-1);*

*copying the hop instructions to an unused segment of micro store in the target microengine (see page 4-48, step 2, "breakpoint routine placed in unused code space 2"); and*

*executing the hop instructions (see page 4-47, section 4.17.2, the last paragraph, "it is possible for the user to hop the execution of the Microengines from one context change point to the next").*

As per claim 24: The manual discloses,

*The method of claim 23 further comprising resuming execution of the threads in the target micro engine using the stored program counters (See page 4-48, step 8, "branch back", and associating with the program counters in Figure 4-1).*

As per claim 25: The manual discloses,

*The method of claim 23 wherein pausing comprises receiving a pause command from the remote console system (See page 4-47, second paragraph in section 4.17.2: The User can manually place the Microengine into paused state").*

As per claim 26: The manual discloses,

*The method of claim 23 wherein the hop instructions are selected by a user through the remote console system (See page 4-47, second paragraph in section 4.17.2: The User can manually place the Microengine into paused state").*

As per claim 27: The manual discloses,

*The method of claim 23 wherein the hop instructions control a start and a stop of selected bus ports with each hop (See page 4-47, second paragraph in section 4.17.2: "transmitted into an I/O debug port").*

As per claim 28: Regarding,

*"The method of claim 23 further comprising:*

*modifying the program counters of the plurality of micro engines to jump to a start of the hop instructions;*

*modifying the hop instructions to return to the stored program counters;*

*copying the hop instructions to an unused segment of micro store in the micro engines; and*

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*executing the hop instructions in the micro engines in unison."*

The Claimed recitation repeats the steps of Claim 23 with respect to the use of a plurality of micro engines, where The manual discloses the limitation of this claim as in the rationale put forth in the Claim 23. Furthermore, The manual regards the debug support in the multiple Microengines (page 4-47, section 1.17.2: "the Microengines").

As per claim 29: The manual discloses,

*The method of claim 28 further comprising resuming execution of the threads in the plurality of micro engines using the stored program counters* (See page 4-48, step 8, "branch back", See page 4-47, "the Microengines", and associating with the program counters in Figure 4-1).

As per claim 30: The manual discloses "A processor" of Claim 30 in the same rationale put forth in the method of Claim 23.

As per claim 31: The manual discloses "The processor" of Claim 31 in the same rationale put forth in the method of Claim 24.

As per claim 32: The manual discloses "The processor" of Claim 32 in the same rationale put forth in the method of Claim 25.

As per claim 33: The manual discloses "The processor" of Claim 33 in the same rationale put forth in the method of Claim 26.

As per claim 34: The manual discloses "The processor" of Claim 34 in the same rationale put forth in the method of Claim 27.

As per claim 35: The manual discloses "The processor" of Claim 35 in the same rationale put forth in the method of Claim 28.

As per claim 36: The manual discloses "The processor" of Claim 36 in the same rationale put forth in the method of Claim 29.

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**Conclusion**

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted T. Vo whose telephone number is (571) 272-3706. The examiner can normally be reached on 8:00AM to 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3694. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ted T. Vo  
Patent Examiner  
Art Unit 2122  
January 14, 2005